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Conference Paper**Cited By**This article has been cited
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is cited in Scopus**Intraoperative microkeratome complications in 47,094 laser in situ keratomileusis surgeries**[Nakano, K.](#)^{a b} , [Nakano, E.](#)^a, [Oliveira, M.](#)^a, [Portellinha, W.](#)^a, [Alvarenga, L.](#)^a ^a Excimer Laser Santa Cruz, São Paulo, Brazil^b Rua Santa Cruz 398, São Paulo, CEP 04122-000, Brazil**Abstract**

PURPOSE: We evaluated the incidence and intraoperative microkeratome-related complications in laser in situ keratomileusis (**LASIK**). **METHODS:** We present non-randomized, retrospective, comparative, interventional case series. We reviewed the records of patients who underwent **LASIK** from August 2000 to March 2004 at Excimer Laser Santa Cruz, São Paulo, Brazil (47,094 eyes). We identified 369 eyes (0.0078%) with an intraoperative complication. Data were collected regarding microkeratome, average keratometric power, and type of complication. **RESULTS:** The Hansatome microkeratome was the most common microkeratome used (34,182 eyes; 73%), followed by the Automated Corneal Shaper-ACS (11,164 eyes, 24%) and the Nidek MK-2000 (1748 eyes, 3.7%). Intraoperative complications were more common with the ACS (1.26%) than with the Hansatome (0.63%) and MK-2000 (0.63%) ($P < .001$; $P = .03$; respectively). Complications included incomplete flaps (0.23%), buttonholes (0.13%), thin flaps (0.08%), and free flaps

(0.08%). Buttonholes were more frequent with the ACS (0.34%) than with the Hansatome (0.06%) ($P < .001$) and free flaps were more common with the ACS (0.20%) and MK-2000 (0.29%) than with the Hansatome (0.04%) ($P < .001$). Keratometric power of eyes with intraoperative complications was significantly higher in the ACS group compared to the Hansatome group. CONCLUSIONS: Intraoperative complications were more common with the ACS than with the Hansatome or MK-2000. Buttonholes were most frequent with the ACS, and the Hansatome had the lowest incidence of free flaps.

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 Nakano, K.; Rua Santa Cruz 398, São Paulo, CEP 04122-000, Brazil; email: kozonakano@uol.com.br

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